NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

Land Reconstruction

Abandoned Mined Land

(Acre)

Code 543

DEFINITION

Restoring land and water areas adversely affected by past mining practices and increasing the productivity of areas for a beneficial use.

PURPOSES

To stabilize mined areas so that they can be used to support desirable vegetation; reduce erosion and sedimentation; enhance water quality or quantity; maintain and improve the visual quality of the landscape; and protect public health, safety, and general welfare.

CONDITIONS WHERE PRACTICE APPLIES

Abandoned mined land that degrades the quality of the environment, prevents or interferes with the beneficial use of land or water resources, or endangers the health or safety of individuals.

CRITERIA

Site preparation. Unsuitable soil material must be removed and buried so that it does not adversely affect water quality or plant growth. Boulders, other rocks, and similar materials shall be buried or otherwise placed where they do not interfere with water disposal practices, stabilization operations, and the planned use of the land. These materials must be disposed of in a manner that minimizes the potential for seepage that can pollute surface and ground water. Materials containing heavy metals must be buried to a depth below the root zone or suitable kinds and amounts of soil amendments must be added.

Removal and placement of material for final cover. An effort should be made to reconstruct the soil with materials available on the site. If feasible, soil material suited to plant growth shall be salvaged, stockpiled, and protected for use as final cover material.

The reconstructed soil must meet the requirements for the specified land use on at least 80 percent of the area. The rest of the area must be in such condition that it can be stabilized.

The salvaged material and other suitable materials must be spread over the graded areas to the depth specified in the reclamation plan. The final slope must permit application of needed conservation and management practices to control soil losses to permissible levels. If settlement is likely to interfere with the planned use of the land, surface drainage, or water disposal, allowance must be made for the expected settlement during final grading.

Protective measures in areas with high walls. Provisions must be made to reduce potential safety hazards and erosion and water pollution problems in areas with high walls. Protective measures must be applied to reduce the

detrimental effects of landslides and other unstable conditions.

Visual resources. The appearance of the reclaimed sited must be in accord with standards for maintaining and improving the visual quality of the landscape and must be compatible with the adjacent landscape. Areas of high public visibility or those offering direct or indirect human benefits shall be evaluated and considered in landscape resource management planning and design. Spoil piles and borrow areas should be shaped to blend with the adjacent landscape.

Restoration of borrow area. If cover material is taken from an area outside the site, the borrow area must be graded and reshaped to insure proper drainage and must be revegetated to control erosion.

If the cover material is taken from adjacent farmland, the topsoil from the area must be stockpiled separately and then replaced after the land is restored for its intended purpose.

If the borrow area is prime farmland, the A and B horizons (or the B and C horizons if applicable) must be removed and stockpiled separately by horizon and then replaced on the borrow area in natural sequence. The combined thickness of the replaced horizons should be adequate to restore the original soil productivity.

CONSIDERATIONS

Evaluate the properties of the soils, including geological and hydrogeologic values; the quantity and quality of water; and the potential of related resources to determine their suitability for use in reconstruction operations. Consider measures for the placement of soils or spoil materials; location of access roads; potential for water disposal and impoundments; measures to enhance visual resources; provisions for controlling erosion and sedimentation; practices for eliminating public health or safety hazards; and suitability of the reclaimed land for its intended use.

Planning Considerations for Water Quantity and Quality.

This practice is a management system that may combine practices to most conservation goals. Consult the planning considerations for water quantity and quality for the practices used in this system.

A special concern is the potential for uncovering or redistributing toxic materials from earth moving activities.

PLANS AND SPECIFICATIONS

Plans and specifications for reconstructing abandoned mine land shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

Areas to be graded shall be cleared of trees, logs, brush, rubbish and other undesirable materials that can prevent proper application of the practice. These materials shall be disposed of in a manner that precludes interference with water disposal practices of the operations associated with the planned use of the land.

Materials suited to growing vegetation shall be stockpiled and protected for use as final cover. Vegetation that can be saved should be properly identified and protected. Temporary seeding, mulching, water disposal and similar measures to help control erosion should be used as necessary.

Overhanging rocks and walls that are to be covered shall be sloped ½ to 1 before the soil is placed against the wall, unless a flatter slope is needed for stability. The area shall be shaped to the line and grade shown in the plans or as staked in the field. Unless otherwise specified, full material shall be spread in successive layers not more than 2 feet thick.

Boulders and other rocks shall be covered to the depth specified for the planned land use.

After major earthmoving is completed, the cover material should be spread over the surface. The work shall be finished according to the design and to the tolerances specified in the plans.

If borrow material from areas outside the reclamation site is used, these areas must be graded, reshaped, and left as specified or shown in the plans.

OPERATION AND MAINTENANCE

A plan shall be prepared that provides specific details concerning maintenance and operation of conservation practices identified in the reclamation plan. The maintenance and operation plan should specify procedures to:

1. Fill areas where settlement may adversely affect drainage and land use.
2. Promptly repair and revegetate bare spots and eroded areas.
3. Add soil amendments to soils that cannot support adequate vegetation or replace them with suitable soil material.
4. Maintain access roads.
5. Keep drainage structures and channels clean and functional.
6. Apply fertilizer and lime.
7. Control weeds.
8. Use proper grazing practices.
9. Control traffic by vehicles.